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G GEC-0462

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222

05/23/91

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 6 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-5 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-5 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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**FOREIGN GOVERNMENT
INFORMATION**

EXAMINER'S ACTION

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(u) 1. The Information Disclosure Statement filed January 9th, 1991 has been entered and considered.

(u) 2. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the title of the invention, each of the lettered items should be preceded by the headings indicated below.

- (a) Title of the Invention.
- (b) Cross-References to Related Applications (if any).
- (c) Statement as to rights to inventions made under Federally-sponsored research and development (if any).
- (d) Background of the invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97-1.99.
- (e) Summary of the Invention.
- (f) Brief Description of the Drawing.
- (g) Description of the Preferred Embodiment(s).
- (h) Claim(s).
- (i) Abstract of the Disclosure.

(u) 3. The drawings are objected to because it appears from the specification that Figures 1 and 2 are prior art

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and if so they should be labeled --PRIOR ART-- . Correction is required.

(u) 4. Claims 2-5 are rejected under 35 U.S.C. 112, fourth paragraph, as being of improper dependent form for failing to further limit the subject matter of a previous claim.

(u) The claims are set forth quasi-method steps or desired operating characteristics rather than reciting structure that would further limit the claims upon which they depend.

(c) For example, in claim 2 there is recited that the "codes are selected and used in a sequence ..." but there appears no positive recitation of structure. Similarly the remaining claims do not positively set forth limiting structure.

(u) 5. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

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(c)
(4)

6. Claims 1-5 are rejected under 35 U.S.C. 103 as being unpatentable over the admitted prior art as embodied by Figure 1 in this case in view of any one of the Thue ('495) or Albanese et al ('154 or '925) or Rittenbach ('812).

(c) The admitted prior art as embodied by Figure 1 in this case substantially discloses the present invention. However, the admitted prior art as embodied by Figure 1 in this case does not disclose the memory for storing the codes and the selector means to select the codes from the memory means.

(c) Any one of the Thue ('495) or Albanese et al ('154 or '925) or Rittenbach ('812) discloses the use of a storage means by way of either a memory or a register means for the purpose of storing code sequences in the same field of endeavor, i.e. a radar ranging system capable of modulating the transmitted signal with a pseudo random code.

(c) It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system shown by Figure 1 in this case to include a memory means to store the different code sequences as taught and as motivated by any one of the Thue ('495) or Albanese et al ('154 or '925) or Rittenbach ('812) for the purpose of modulating the transmitted signal and correlating the return signal in order to calculate the range of a target. The remaining claims are considered to be either shown by the references or considered to be clearly inherent structure in the radar ranging art. For example, the disclosed code

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storage means inherently can "operate" in the manner as recited in the claims.

(u) 7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

"A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent."

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States."

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent."

(c) 8. Claims 1-5 are rejected under 35 U.S.C. § 102 (a) or (e) as being anticipated by Kretschmer, Jr. et al (H767) or Krikorian ('830) or Zerkowitz ('009).

(c) The claims are considered met by any one of the Kretschmer, Jr. et al (H767) or Krikorian ('830) or Zerkowitz ('009) systems which disclose a radar ranging system including modulating the transmitted signal with a plurality of pseudo random codes and correlating the return signal with a stored replica of the modulating code sequence. The remaining claims are considered to be either shown by the references or considered to be clearly inherent structure in the radar

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ranging art. For example, the disclosed code storage means inherently can "operate" in the manner as recited in the claims.

(u) 9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(u) The cited art is typical of radar ranging systems.

Holliday et al (H548) teaches sidelobe control in a coded radar system.

(u) 10. John B. Sotomayor 703-308-0478

John B. Sotomayor

JOHN B. SOTOMAYOR
EXAMINER
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